Collaborative Care to Improve LDL Goal Attainment in Clinical Practice

Overview, Lessons Learned and Implications in the Era of Accountable Care

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Disclosures

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Speakers Bureau
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  – Aegerion

Consultant
  – Genzyme
  – Kaneka America
Outline

• **Overview of Collaborative Care**
  – Introduction and Definitions
  – General Considerations
  – Treatment Factors Targeted

• **Rationale for Collaborative Lipid Treatment**
  – Lipid Treatment and Quality Gaps
  – Role of Team Care in Healthcare Delivery Reform
  – General Aspects of Collaborative Lipid Treatment

• **Lessons from Collaborative Lipid Practices**
  – Tertiary Lipid Clinic
  – Integrated Healthcare System
  – Academic Cardiology Practice

• **Summary**
Overview of Collaborative Care
Introduction to Collaborative Care

• Collaborative care has significant potential to enhance the delivery of health care

• New care delivery models call for making use of all healthcare professionals to improve patient access and deliver more efficient and effective care

• Guidelines and current literature support the need to better treat hyperlipidemia and other chronic diseases

• Models using a multidisciplinary team approach are well documented for this often complex process

• The healthcare team requires professionals with a wide range of expertise to achieve all goals

• The collaborative team focuses on disease management and prevention over the lifespan through diet and exercise, pharmacologic therapies, and adherence

AHA Scientific Statement. Circulation. 2005;112;3184-3209
Definitions of Collaborative Care

Key definitions of Collaborative Care are provided by the World Health Organization and Others

**WHO Definition**  “Collaborative care in healthcare occurs when multiple health providers from different professions provide comprehensive services by working with

- People
- Families
- Care providers
- Communities
to deliver the highest quality of care across settings”
Considerations and Questions for Implementing a Collaborative Care Team

**Issues to consider:**

- Direction of care
- Delegation and supervision of medical acts
- Accountability
- Liability
- Patient understanding of the team approach
Considerations—continued

• **Roles and responsibilities** of each team member need to be clearly defined, based on their scopes of practice and individual knowledge, skill, and abilities

• All team members should understand their roles and those of other team members

• Where scopes of practice overlap, there needs to be well-documented delineation of responsibilities

• How will health care decisions be made?

• Who is responsible and therefore accountable for health delivery decisions?
Considerations—continued

• **Health care outcomes** the team is striving to achieve should be known by all
• All should be aware of quality assurance mechanisms to monitor team function and health outcomes
• How will the team ensure that the patient remains a central and integral member of the team?
• **Who will be responsible to manage patient expectations and respond to concerns, and how?**
Considerations—continued

- A policy and procedural framework which defines and supports team functions should be present
- There should be identification of necessary and sufficient resources to achieve desired outcomes
- Who will coordinate care, manage the team, and ensure efficient and effective communication among team members and across teams?
Treatment Factors Targeted by Collaborative Care

Factors can be addressed through interventions and are divided into 4 categories

Patient-Related Factors

- Socioeconomic traits
- Psychological distress
- Health beliefs
- Other barriers

- Require open dialogue which encourages the patient to examine risks/benefits of treatment plan
- Maintenance of open communication will enhance adherence to the plan
Regimen-Related Factors

• Regimens need to be consistent with guidelines but are often complex
• Treatments may need to be introduced in stages by several healthcare providers having responsibility for individual outcomes
• Frequent follow-up appointments are often needed to determine successful treatment implementation
• Communication and cooperation among team members is key to coordinating treatment
Provider-Related Factors

- Provider knowledge and skills play a key role in successful treatment, which often takes place over a lifetime.
- The Worchester Area Trial for Counseling in Hyperlipidemia (WATCH) evaluated the utility of a training program in nutritional counseling alone or with an office support program, which took ~8-10 minutes.
- At 12 months, significant differences were observed in dietary fat intake, serum LDL-C, and body weight in those in the intervention + office support group.
- The study highlighted the benefits of behavioral counseling by providers, plus support systems, for improving adherence.

System Factors

- System and process factors drive how care is delivered, and affect treatment, adherence and outcomes
- Integrated systems with coordinated team care, electronic medical records with tracking systems (for lipids, weight, BP and medication refills), quality reporting, and QI have shown improved lipid outcomes vs. usual care

Summary

Collective efforts of the team can address the many factors influencing adherence, reinforce the messages of other team members, and increase the probability of success in achieving and maintaining treatment goals
Rationale for Collaborative Lipid Management
In the Era of Healthcare Reform
Disclosures
Karen Aspry, MD

None
% of High Risk Patients in the U.S. Achieving an LDL Target of < 100mg/dl Based On Contemporary Data

3-NCQA The state of healthcare quality. Commercial HMO data for patients with CHD-related diagnoses, available at NCQA.org
Barriers to Achieving LDL Control

Patient
- Poor education re: rationale
- Poor health literacy and communication skills
- Socioeconomic and cost issues

Provider
- Lack of time
- Lack of knowledge or training
- Low reimbursement

System
- Care model for acute illness
- No infrastructure for disease or population management, quality reporting or QI
- No financial incentive for QI
- Fragmented care environment

Milestones in the National Strategy to Improve Healthcare Quality in the U.S.

Quality Gaps Publicized by IOM
- The Urgent Need to Improve Healthcare Quality—JAMA 1998
- To Err is Human—National Academy Press 1999
- Crossing the Quality Chasm—National Academy Press 2001

Quality Improvement Domains and Measures
- IOM: Safety, Effectiveness, Patient-Centric, Timeliness, Efficiency, Equity
- JACHO, NCQA, AMA/PCPI, CMS, NQQA, NQF disease-specific quality measures

Payment Reform to Reward Quality
- PQRS / P4P
- Shared Savings/ACO
- FFS Plus Coordinated Care Payment
- Episode of Care Payment
- Capitated Payment

Delivery System Redesign to Improve Quality
- CCM
- PCMH

Demonstration Projects funded by the ACA
- EHR implementation funded via HITECH
A Delivery System of Team-Based Care Is a Key Element of The Chronic Care Model

In the Chronic Care Model, **Delivery System Design** refers to care delivery via team members (MDs/DO’s, NPs, RNs, PharmDs, SWs, MA’s, etc.)

Engaged in traditional and other encounters, and non-visit care

For visit planning, care management, self management support, outcomes tracking and QI

**Supported by** Decision support tools, clinical IS, other elements

**Goal** Improve quality

**Payment** FFS +/- Incentive

Comprehensive and Coordinated Team-Based Care is A Major Attribute of the Patient Centered Medical Home

In the PCMH Model, Care which is Comprehensive, Coordinated, Accessible, driven by Quality+ Safety and Patient Centered is delivered by teams (MDs/DO’s, NPs, P.A.s, RNs, RDs, SWs, IT personnel)

Via traditional and other encounters, and non-visit care

For care coordination, management, outcomes tracking and QI

Payment  Fee-For-Service
          + Incentive Payment
          + Care Coordination Fee

Model Goals
Higher quality and Lower costs = Value
Accountable Care Organizations (ACOs) Are Healthcare Systems In Which Care Delivery and Payment Are Tied to Quality & Cost for a Population

In the ACO Model, PCPs, specialists, hospitals and other services link to deliver coordinated care, and are accountable financially & clinically for at least 5,000

Key Elements
• PCMH base
• Coordinated care delivery
• Health IT and reporting
• Population management and QI

Payment
Care Episodes + Shared Savings

Goal Improve patient experience, costs, population health
Population Management is a Fundamental Element of ACO’s

- Expands principles of disease management to *entire practice*, including those who fail to visit
- Involves detection, management and closure of *all “care gaps”*
  - Example: In the case of hyperlipidemia (20% of adults), a 10 physician group must manage >5,000 patients, a 100 physician group must manage >50,000 patients
- Requires high functioning team-based care and QI
- Requires a health IT infrastructure with registry and reporting functions
Hyperlipidemia is Well Suited for Collaborative Team-Based Care and Population Management

- Large proportions of adult practice patients
- F/U occurs longitudinally over decades
- Treatment linked to better outcomes and lower costs
- Decision to treat is algorithm-based
- Treatment can be algorithm based
- Adherence requires education, support & outreach
- Care management often complex
- Case management often required
- Performance now a ‘quality metric’ in high risk
## Collaborative Lipid Management Team Member Functions

<table>
<thead>
<tr>
<th>Role</th>
<th>Functions</th>
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<tr>
<td><strong>Physicians and Nurse Practitioners</strong></td>
<td>Provide individual patient care and oversee program</td>
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<td><strong>RNs / Pharmacists / Other Care Managers</strong></td>
<td>Manage meds, lab f/u, visit planning, communications</td>
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<td>Provide education in diet-lifestyle change</td>
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<td></td>
<td>Provide referrals for complex patients</td>
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<td></td>
<td>Provide ‘outreach’ to non-adherent patients</td>
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<td><strong>Receptionists and Medical Assistants</strong></td>
<td>Provide ‘in-reach’ via reminders</td>
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<td><strong>Data-Analysts, IT Personnel &amp; Quality Managers</strong></td>
<td>Create point-of-care CDS tools</td>
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<tr>
<td></td>
<td>Create registries and quality reports to reveal care ‘gaps’</td>
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<td></td>
<td>Coordinate quality reporting and QI processes</td>
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Many Healthcare Settings Have Shown Team-Based Lipid Management Is Superior to Usual Care

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<th>Examples</th>
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<td>Colorado Region</td>
<td>Olson et al, Glasgow et al</td>
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<td>No. California Region</td>
<td>Selby et al, DeBusk et al</td>
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<td>So. California Region</td>
<td>Derose et al</td>
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<td>Other HMOs</td>
<td>HealthPartners</td>
<td>Straka et al</td>
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<td>VA Healthcare System</td>
<td>Several States/Regions</td>
<td>Schectman et al; Shaffer et al</td>
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<td>Geber et al; Harris et al; Mazzolini et al</td>
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<td>Military Healthcare System</td>
<td>Naval Bases</td>
<td>Blair et al; Weaver et al; Lee et al</td>
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<td>Academic Tertiary Clinics</td>
<td>Johns Hopkins</td>
<td>Allen et al; Becker et al</td>
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<td>Community Specialists</td>
<td>Midwest Heart Institute</td>
<td>Ryan et al Brown and Cofer</td>
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<td>Federally Qualified Health Centers</td>
<td>San Mateo County, CA</td>
<td>Haskell et al</td>
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Lessons Learned from Collaborative Lipid Treatment: The Tertiary Lipid Clinic

J. Ross
Lessons Learned from Academic Collaborative Lipid Management Practices

Opportunity for Collaborative Practice

CLINICAL

EDUCATION

RESEARCH

Physicians
Nurse Practitioner
Office RN/LPN
Dietician
Secretarial Staff

Patients
Secondary Care
Primary Care
Rationale for Developing a Collaborative Tertiary Lipid Clinic Practice

• Establish clinical diagnosis from professionals with expert knowledge of severe or complex dyslipidemias
• Provide complex, specialized treatment plans related to specific dyslipidemias
• Provide close follow up and monitoring of complex treatment regimens with potential side effects
• Evaluate impact of co-morbidities which may require ongoing assessment and management
• Assess and treat environmental factors contributing to cardiac risk
• Provide follow up to avoid patients “falling through the cracks”
The Tertiary Lipid Clinic Patient Population

- **Self Referrals**
  - Patients
  - Families
  - Publications
  - Internet

- **Provider Referrals**
  - Within institution
  - Affiliates
  - Seminars/programs
More Than Just Lipid Lowering
Other Reasons for Referral and Treatment

• Nutrition
• Weight control
• Smoking cessation
• Stress management
• Exercise
• Risk Assessment
• Understanding of disease processes
Pre-Visit Lipid Clinic Planning
Once an Appointment Has Been Made
Mail Communication to the Patient for Upcoming Visit

• Introduction to Clinic’s Services
• Welcome Letter
  • Insurance information
  • Map to facility
• Demographic Sheet
  • General information
  • Health care providers
  • To whom should we communicate
• Medical History
  • Past Lipid History: Labs, Medications, Treatment Failures
  • Other Past Medical History, Current Medications
  • Family History
The Initial Lipid Clinic Visit

Role of Nursing

RN / LPN
- Bring patient to room
- Obtain / record vital signs
- Obtain ECG (if needed)
- RN – In many clinics will gather data, then present to physician

Nurse Practitioner
- Gather data
- Perform physical examination
- Present patient and plan to physician
- Order additional testing

Role of Physician
- Receive information about the patient
  - Verify physical examination
  - Order additional testing
  - Create initial treatment plan
- Meeting with dietician
Elements of the Initial Lipid Clinic Assessment

- History, Family History and Physical Exam
- Laboratory testing
- Working diagnosis
- Problem list
- Plan of care
- Implementation of the plan
- Sharing the information with other providers
- Follow up laboratory studies
- Plan for communication between visits
- Follow up appointment
Time Frame for Initial Lipid Clinic Visit

- **LPN** – 5 minutes
  - Data gathering
  - Physical examination
  - Presentation of plan
  - 30 minutes + Additional 10 minutes with physician

- **RN** – 15 minutes
  - Nurse Practitioner
    - Data gathering
    - Physical examination
    - Presentation of plan
    - 30 minutes + Additional 10 minutes with physician
  - RN – Completes PE
  - NP - Verifies findings and discusses plan
  - Contact ~10 minutes depending on severity of condition

- **Physician**
  - Hears presentation of the patient from appropriate provider

- **Contact** ~10 minutes depending on severity of condition
Establishing the Clinical Diagnosis

6 Basic Diagnoses Seen in Lipid Clinics

Hypercholesterolemia, pure (272.0)
  Elevated total cholesterol

Familial Hypercholesterolemia (272.0)
  Elevated total cholesterol
  Family history of elevated cholesterol

Hypertriglyceridemia, essential (272.1)
  Elevated triglycerides

Familial Combined Hypercholesterolemia (272.4)
  Elevated total cholesterol and Triglycerides
  Family history of elevated cholesterol

Hypoalphalipoproteinemia (272.5)
  Isolated low HDL cholesterol

Metabolic Syndrome (277.7)
Non-Physician Provider Roles
At Follow-Up Lipid Clinic Appointments

LPN / MA
• Obtains vital signs +/- medication list

RN
• Gathers data for provider
• Presents information
• Answers patient questions

Nurse Practitioner
• Sees patient independently
• Evaluates efficacy of treatment plan via lab results/other
• Reinforces diet-lifestyle management
• Answer squestions
• Makes changes to plan as necessary - Sees MD if necessary
Physician Role at Follow-Up Lipid Clinic Appointments

- Most non-NP follow up appointments are with the physician

- Not generally a role in our clinic (related to trainees and time issues)

- RN will present patient and physician will evaluate lab results and treatment plan, return to exam room and discuss results, changes, etc.

- Arrange for follow-up lab work and next appointment
Summary: Collaborative Tertiary Lipid Clinic Care

• Patients referred to a tertiary lipid clinic for complex or refractory hyperlipidemias require complex care inclusive of:
  – Proper clinical diagnosis
  – Education re: treatment rationale and side effects
  – Counseling re: diet and lifestyle change
  – Systematic medical follow-up
  – Ongoing management

• A collaborative approach assists in reaching and maintaining lipid goals, achieving long term adherence, and monitoring safety and side effects
Lessons Learned from Collaborative Lipid Treatment:

Integrated Health Care System

Academic Cardiology Practice

K. Aspry
Lessons in Team-Based Lipid Management
From an Integrated Healthcare System
Kaiser Permanente Health System Overview

- Largest U.S. non-profit health plan
  - Founded in 1945
  - 9+ million members
  - 17,000+ physicians, 48,000+ nurses, 175,000+ employees
  - 8 regions serving 9 states + DC
    - Integrated healthcare delivery
  - 37 hospitals and medical centers
    - 650+ offices
    - Pharmacies, Labs, Imaging Centers
  - $50+ billion in revenue in 2012

Graphic modified from: The Commonwealth Fund Publication 1278; Vol 17; June 2009

- “Closed” patient populations
- Extensive computerized clinical data systems
- Vertically integrated healthcare delivery
- Collaborative, team-based care models
- Culture of continuous quality improvement
- Incentives aligned towards prevention

The Kaiser Approach to Population Management of Chronic Disease

The 'Kaiser Triangle', illustrating different levels of chronic care:

- **Case management**
  - 1-5% Highly complex patients

- **Disease management**
  - 20-30% High-risk patients

- **Supported self care**
  - 70-80% of people with chronic conditions

Increasingly Health IT Enabled

**Population-wide prevention**

Source: NHS and University of Birmingham.
Case Management of Lipids & Risk Factors Post-CHD Events in the Multi-Fit Program
Kaiser Permanente Northern California 1988 to Present

s/p Acute MI or Other CHD Event
With Need For Adherence To Meds, Diet, Lifestyle

Enrollment

Hospital Database
PCP Referrals

Multi-Fit Program 9-12 Months

Chronic Conditions Management

Standardized Training Manual, Protocols
Peer Group Meetings

Nurses – Physician Champions

- Surveys to Assess Readiness for Change
- Food Questionnaires with Feedback
- Smoking Cessation Counseling
- ETT and Home-Based Exercise Protocol
- Medication Management via Algorithms
- Tracking and Feedback to Patients / PCPs

RCT of M-Fit vs. Usual Care
N = 585

Outcome: LDL 107 vs. 132 mg/dl at 2 Mos LDL < 130 in 83% vs. 50% at 1 Yr

Chronic CHD (or DM or Severe HL) Not at Lipid Goals
In Need of Disease Management

- MultiFit Graduates
- PCP Referrals
- Hospital Database
- Chronic Conditions Management
- CAD Registry

Pilot Tool

Cholesterol Management Program

Outreach via Mail and Phone
Health Education Class Referrals
Med Management via Algorithms / MD Approval
Tracking Program, Patient Feedback, PCP Reports

Nurses – Pharmacists
Physician Champions

Standardized Training Manuals / Protocols
Peer Group Meetings

Outcomes 1998-2004
Statin Treatment 27%→73%
Median LDL 125→99mg/dl

Fireman, B, Barlett, J Selby, J. Health Affairs 2004; 23:63-75,
Population Management of Hyperlipidemia and Cardiovascular Risk
Kaiser Permanente Northern California 2004 - Present

All Patients with CHD, CVA, AAA, PVD, DM and CKD Needing Adherence to 4 Cardioprotective Medications, Diet, Lifestyle

Electronic Health Record
- Computerized Decision Support
- Point-Of-Care Guidelines, Dashboards, Formulary Support, eRx

Chronic Conditions Management
- Diagnoses of DM, CHD, CVA, PVD, AAA, CKD
- PHASE Registry* Database and Reporting
- Cross Training Manuals / Protocols, Meetings, Conferences
- PCPs Coordinators, Nurses - Pharmacists
- Computer generated lists
- Weekly PHASE Management Time Action Tools and Outreach
- Patient Handouts, Classes

Outcomes 2005-->2012 LDL < 100 mg/dl in 45% → 72%

* PHASE = Prevent Heart Attacks and Strokes Everyday

A Robust Health IT Infrastructure Optimizes Team-Based Population Management of Hyperlipidemia and CV Disease Risk

Linking across patient episodes, providers, settings

KP Health Connect
- Secure Web-Based
- Universal Access
- Real Time
- Linked to Delivery System
- Electronic Ordering
- Digital Imaging
- Secure Messaging

KP.org and My Health Manager

System Modules
- Labs
- Inpatient
- Outpatient
- Emergency
- Pharmacy
- Imaging
- Immunization
- Membership
- Financial & Benefits

Decision Support Tools

Population Management Tools
- Disease registries
- Risk stratification
- Identification of subgroups needing care
- Patient management tools
- Targeted panel lists
- Inreach - Prompts, reminders for clinicians
- Outreach - Letters and automated telephone outreach to members
- Monitoring and process improvement measures and reports

Permission to use this graphic granted by Walter Suarez, MD, MPH, Executive Director, Health IT Strategy and Policy, Kaiser Permanente, August 2013.
Implementing Population Management of Hyperlipidemia In Smaller Practice Settings

Establish a Delivery System of Collaborative Care

• **Partner** with a network NP, RN, pharmacist or dietician
• **Define roles, polices, and protocols** in a manual
• **Integrate team members** into the clinic
• **Engage team members** in pre-visit planning, F/U, and patient outreach
• **Expand roles** of team members as educators
• Hold regular **team meetings**
• **Encourage board certification** in lipidology
Incorporate formal counseling into visits

Provide group teaching via a multi-disciplinary seminar

Use written handouts

Investigate e-health tools such as mobile apps and SMS

Investigate educational TV for the waiting room

Promote patient education portals from NLA, ACC, AHA

Utilize community resources
Implementing Population Management of Hyperlipidemia In Smaller Practice Settings

Incorporate Decision Support Tools at the Point-of-Care

- Use risk calculators from the EHR, web-sites, or mobile apps
- Use guidelines from the EHR, web-sites, mobile apps, or pocket cards
- Use eRx tools with formulary support
- Investigate programming of alerts and reminders into the EHR
Implementing Population Management of Hyperlipidemia In Smaller Practice Settings

Customize the Information System/EHR for a REGISTRY

- Partner with IT for programming support
- Create an EHR-based CV risk registry
- If not possible, create an ACCESS database or use a commercially available care tracker
Implementing Population Management of Hyperlipidemia in Smaller Practice Settings

Customize the Information System/EHR for TRACKING

- Create a data entry form and flowsheet
Implementing Population Management of Hyperlipidemia In Smaller Practice Settings

Customize the Information System for PATIENT FEEDBACK

• Program the EHR to provide patient feedback and communications, especially those which reinforce adherence to medications, diet and lifestyle

10/15/2007
Dear JOHN SMITH,

Results of your lab tests on 10/1/07 are shown below:

Cholesterol Panel:
Your Total Cholesterol was 161 milligrams/dl (Goal < 200 milligrams/dl)
Your HDL (good) cholesterol was 33 milligrams/dl (Goal > 40 milligrams/dl)
Your LDL (bad) cholesterol was 95 milligrams/dl (Goal < 100; Optional < 70 milligrams/dl)
Your Total Triglycerides was 198 milligrams/dl (Goal <150 milligrams/dl)

These results show: Your triglycerides are higher than recommended, and your good HDL-cholesterol is lower than recommended.

Liver Function Tests:
Your ALT was 21 IU. Normal ALT is 10-34 IU.
The results show: Your liver function is within normal at this time.

Other Measures:
1. Our records indicate you may not be taking the following protective medications:
   - Aspirin / Anti-platelet medication
   - Beta-Blocker medication
   - Cholesterol lowering medication

2. Our records show no Cholesterol Test in ___________ months.

At this time, I recommend:

X Medications:
X Continue: Lovastatin 40 milligrams daily at bedtime
X Change: Naspam from 500 mg to 1,000 milligrams daily at bedtime
   - Add:
     X Stop for now:
     X PRESCRIPTION ENCLOSED

X Lab test in: 2 MONTHS FOR FASTING LIPIDS AND LIVER TESTS (LAB SUP ENCLOSED)

X Diet changes: Reduce intake of refined carbohydrate. Increase intake of monosaturated fats.

X Exercise changes: Moderate intensity exercise 30 to 45 minutes a day

X Appointment with me on ____________________

Thank you for helping us reduce your risk of heart disease, stroke and other blood vessel diseases. Please feel free to contact us at 401-729-2503 if you have questions.
Implementing Population Management of Hyperlipidemia In Smaller Practice Settings

Customize the Information System/EHR for REPORTING

- Program the EHR to provide a quality report or list which interfaces with reporting software
- If unavailable, create a separate ACCESS database or investigate commercially available tools
- Engage all team members in QI using action tools and patient outreach
Anticipate Barriers

Missing Labs / Manual Lab Entry
  • Due to fragmented lab services

Insufficient Computerized Decision Support
  • No dashboards or panel management tools
  • No alerts of patients not at goals or overdue
  • No EHR-embedded risk calculators
  • No linked eRx or formulary support tools

Insufficient Quality Reporting / QI Processes
  • Inability to program/interface with reporting tools
  • Insufficient resources for outreach and QI
  • Insufficient resources for external reporting
Summary

• **Collaborative care** requires clear roles, goals of care, accountability, policies, procedures and resources.

• **Patient, provider, and system factors** which impact treatment and adherence are best targeted by teams.

• **Healthcare reform** aims to close quality gaps and reduce costs, and team-based care will play a major role.

• **Collaborative lipid management** has improved outcomes across all U.S. health care delivery settings, with a long legacy in tertiary lipid clinics.

• **Population management of hyperlipidemia** is most developed in integrated delivery systems with robust health IT, but is achievable in smaller settings via team-based care and information systems, and will be integral to the success of ACO’s.
Thank you!

Joyce Ross
Karen Aspyr
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